III. Gather Data

A. Wind Speed on Lake Erie

- Click on the "Wind Speed" site.

1. Predict which areas of Lake Erie will have the highest waves. Record your answer as a written description of the location relative to other parts of the lake.

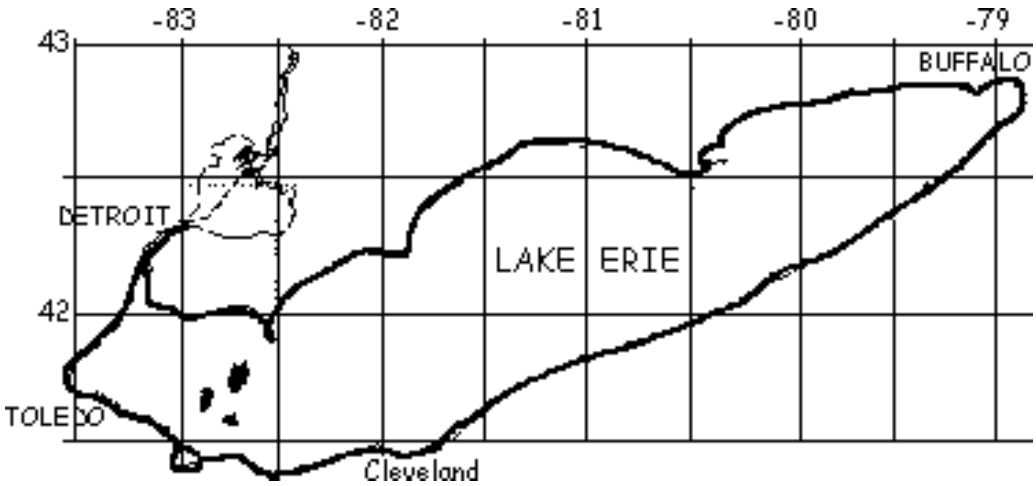
_____

_____

_____

_____

2. Draw the area of highest waves on the map of Lake Erie.



3. Why do you think these areas will have the highest waves?

_____

_____

4. Convert the highest wind speed from knots to miles per hour. (One knot is 1.15 miles per hour.)

- Click "Back" until you get back to the OAR Great Lakes Gather Data site.

B. Wave Height on Lake Erie

- Click on the "Wave Height" site.

1. Check your prediction in #1 above. Was your prediction correct?

   _____

2. How many feet high are the highest waves on Lake Erie?
   (one foot = 12 inches, one meter = 100 cm, one inch = 2.54 cm)

- Click "Back" until you get back to the OAR Great Lakes Gather Data site.

C. Water Elevation

- Click on the "Water Elevation" site.
- This map uses elevation like a topographic map. Elevation means height above sea level. Higher elevations are higher above sea level.

1. What part of Lake Erie has the highest water elevation?

   _____

2. What part of Lake Erie has the lowest water elevation?

   _____

3. What is the direction of water flow in Lake Erie?

   from the _____ to the _____.

4. What is the total difference in water elevation from the northeast end of Lake Erie to the southwest end?

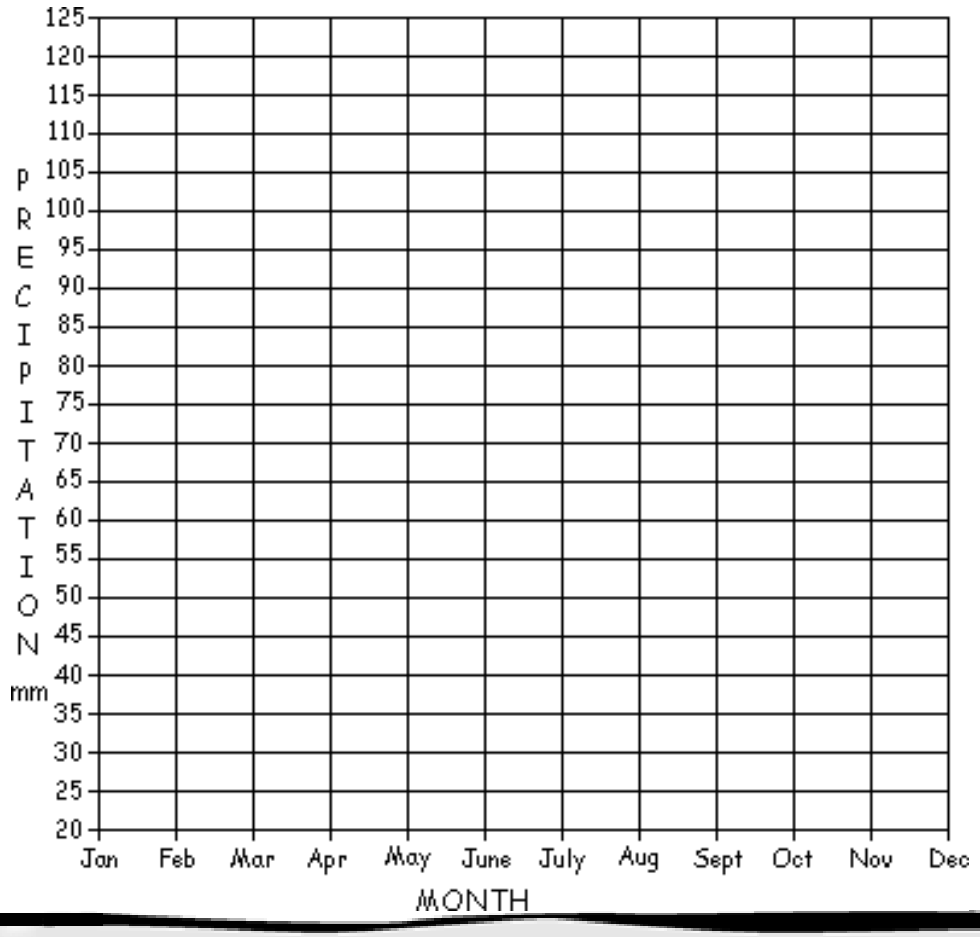
   _____meters

- Click "Back" until you get back to the OAR Great Lakes Gather Data site.
- Click “Forward” at the bottom of the screen.

D. Graphing Overland Precipitation

- Click on the "Lake Erie Precipitation" site.

1. Graph the precipitation during 1900.



- Click "Back" until you get back to the OAR Great Lakes Gather Data site.

E. Temperature Changes with Depth

- Click on the "Lake Ontario Vertical Temperature" site.
- This map shows you the water temperature at various depths of Lake Ontario. The picture in the right lower corner shows the whole lake with lines drawn where the four cross sections are taken.

1. What is the coldest water temperature in Lake Ontario? ____°C

2. What is the range of depth at which the water is 8 degrees Celsius at cross section "C"?

   _____meters to _____meters

- Click "Back" until you get back to the OAR Great Lakes site.

F. Effects of Foreign Species on Local Animals

- Click on the "Health Indicator" site.
- Read the site and answer the following questions.

1. How is the "health" of Lake Michigan's water life populations measured?

_____

2. Why does the lack of amphipods affect the fish population?

_____

3. What do amphipods eat?

_____

4. Why do you think the amphipods are disappearing?

_____

- Click on the "amphipods" hot text in the site.

- Scroll down to the blue and white maps of the Diporeia population in Lake Michigan.

5. When you compare the maps from different years, what can you infer (figure out) about amphipods' population?

_____

_____

6. Why is it important to measure seemingly unimportant things such as the number of invertebrates in the mud at the bottom of lakes?

_____

_____

_____

7. How do scientists make maps like these?

_____

_____

- Click "Back" until you get back to the OAR Great Lakes Gather Data site.

G. Zebra Mussels - A Closer Look

- Click on the "Zebra Mussel" site.
- Read paragraphs 1, 2 and 4 of the "Impacts" section.

1. What problems are caused by Zebra Mussels?

_____

_____

_____

_____

2. What good things have happened due to Zebra mussels?

_____

_____

_____

- Read the "Methods of Control" section.

3. List the three methods of control you think are best. Write why you think these are the best methods.

Method	Why it is good
a._____	_____
	_____
b._____	_____
	_____
c._____	_____
	_____

- Click "Back" until you get back to the OAR Great Lakes Gather Data site.
- Click on the "Zebra Mussels Biofouling" site to see examples of Zebra mussels biofouling and living on other mussels.
  This picture show how zebra mussels can block water pipes.

- Click the "Next slide" button.
  This picture shows how zebra mussels live on and kill native mussels.

- Click "Back" until you get back to the OAR Great Lakes main screen.

- Click "Application".